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CONFIDENTIAL

FILE Training 3

DD/S 73-0589

14 FEB 1973

MEMORANDUM FOR: Director of Central Intelligence

Mr. Schlesinger:

In connection with your mention of new approaches to the business of intelligence, Hugh Cunningham, Director of Training, and I thought the attached material describing a "New Methodologies" plot in the current CIA Senior Seminar, would be of interest.

In addition we hope you could meet with the Senior Seminar some time prior to its 23 March 1973 final date. This seminar is our top internal training course with a student body consisting of 20 key rising officers. A roster of the members is also attached.

(signed) John W. Coffey

John W. Coffey

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Att 1: Block III Schedule

Att 2: Student List

DD/S:JWC:cav (15 February 1973)

Distribution:

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SCHEDULE

CIA SENIOR SEMINAR THREE

21 January - 23 March

BLOCK III: NEW METHODOLOGIES OF INTEREST TO INTELLIGENCE

BLOCK MANAGER:

ASSISTANT BLOCK MANAGER:

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CIA SENIOR SEMINAR

Block III: NEW METHODOLOGIES OF INTEREST TO INTELLIGENCE

The growth in the size and complexities of the target subjects of U.S. Intelligence and the Intelligence Community itself poses serious questions concerning the adequacy of traditional approaches of intelligence analysis and management of intelligence resources. The family of new methodologies has been used with success in such areas of intelligence as the development of large technical collection systems and data reduction. Interest in applying these techniques to intelligence analysis and management has been growing, but it still lags due to human resistance to change and as a result of conflicting and often unproven claims as to their value. This Block presents a brief overview of the major quantitative methodologies and provides a more detailed exposure to several of particular interest in intelligence work.

.MONDAY, 12 FEBRUARY

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MONDAY, 12 FEBRUARY - continued

The post World War II behavioral revolution in the social sciences has made it possible for analysts of international affairs to employ more precise formulations of important concepts, and to uncover recurring behavioral patterns in situations hitherto treated as unique. discussing the historical context of the behavioral revolution and some of the reasons for the lag in applying these new methods, a proponent of these new approaches will discuss their capabilities and components. He will present an overview of the many new theoretical approaches (e.g., Systems Theory and Game Theory) and descriptions of some of the techniques being used in them (e.g., Decision Analysis, Simulation), and conclude with a discussion of possible approaches to the utilization of these new methods in foreign affairs and intelligence analysis.

|330 1400) 1630)

<u>Probability Estimates and Probabilistic Procedures</u> in Intelligence Analysis

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Intelligence forecasts are often sufficiently uncertain so that the extent of the uncertainty should be communicated to the users. Probabilities and odds are natural numerical devices for doing so. But various problems, including unfamiliarity with probability theory, the vague, verbal, and qualitative nature of much intelligence data, and certain human biases, make probability estimates difficult. A new intelligence information processing technology built around Bayes's Theorem of probability theory has been developed and is coming into extensive use. One of its developers, a nationally recognized authority in this field, will explain it and illustrate its application to solution of an intelligence estimation problem. He will also discuss efforts in both CIA and DIA to study and exploit this technology.

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TUESDAY, 13 FEBRUARY

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0945) - Management Science and Management of Intelligence

Information Science Training Staff, Office of Training

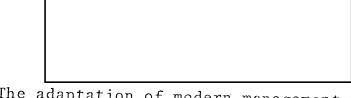
Intelligence organizations are currently pressed to provide even more effective management of limited resources. One approach to this problem is the fuller use of quantitative and analytical methods which collectively are called Management Science. An advocate of this concept will briefly analyze management processes and then discuss the relevance and use of such methods as organization theory, probability, forecasting, resource allocation, and decision-theory, as an aid in the Management of Intelligence.

1000) - Exploration of New Methodologies in the CS

Panel:

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The adaptation of modern management methodologies and techniques to the particular needs of the Clandestine Service will be surveyed by two officers assigned to this area. New approaches for evaluating and analyzing risk, productivity and resource use in support of CS managers will be discussed, with examples of progress to date.

- 1300) Film: Man and Computer in Perspective
- 1330) ADP in CIA: Survey and Outlook

Charles A. Briggs,
Director, Office of Planning, Programming
and Budget

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TUESDAY, 13 FEBRUARY - continued

Three generations of computers have profoundly impacted on the work of CIA--an Agency whose first human generation is still very much alive. A senior officer who has been associated with many facets of ADP activities will present a panorama of the major efforts to cope with the burgeoning information handling problem and with the increasingly sophisticated applications of ADP for technical collection, intelligence analysis and management, including some peculiar to the Agency. He will outline some likely future trends and developments in how the Agency organizes and applies its ADP resources.

WEDNESDAY, 14 FEBRUARY

0830) 0945) - How to Get in Trouble With Money

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Seminar Member

A Senior finance officer, a member of the Senior Seminar, will describe some of the most common problems arising in money management in the Agency and cite examples of ways in which Agency personnel have gotten into trouble with money. He will relate several anecdotes about novel means of delivering money and some equally novel ways of absconding with it.

1000) - A U.S. Strategic Model: The Arsenal Exchange Problem

Bruce C. Clarke, Jr., Director of Strategic Research

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WEDNESDAY, 14 FEBRUARY - continued

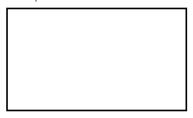
Understanding Soviet defense policy is a major goal of U.S. intelligence. The Soviet view of the relationship between the strategic forces of the U.S. and USSR is an important input to the determination of Soviet defense policy. The composition and complexity of the opposing nuclear arsenals make it difficult, however, to measure the strategic balance. Computer-driven interaction models help to overcome the ambiguities of simple quantitative measures by relating the numbers and characteristics of the opposing arsenals to likely target plans under different strategic situations. The Arsenal Exchange Model has been used increasingly in this way to support analysis of U.S. and Soviet SALT proposals and to assist in projecting Soviet strategic forces for National Intelligence Estimates and inter-agency studies conducted under NSC auspices.

1300) 1345) - Optional Film: <u>Future Shock</u>

Rescheduled from Thursday, 25 January

1400) - Panel: Bosses As Seen By Secretaries

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A panel of senior secretaries from different Agency components will discuss with Seminar members their perceptions of bosses. Drawing on their experience, the panel members will identify and discuss those characteristics and practices of bosses which contribute to an effective and smooth-running office and help to motivate secretaries, increase their effectiveness and gain their commitment, as well as those which dampen their sense of initiative and make it difficult to run a good shop.

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THURSDAY, 15 FEBRUARY

0830)
1000) - Intelligence Products: Problems and Improvements

Andrew W. Marshall, Director, Net Assessment Group, NSC

Problems in present intelligence products as seen by NSC staff consumers will be discussed by the Director, Net Assessment Group, NSC. He will discuss problems with present products, the need for sensitivity to consumer needs, possible new approaches to analysis, and the impact of net assessment on intelligence.

1030) 1230) - <u>Futurism</u>

> Joseph F. Coates, Office of Exploratory Research, National Science Foundation

The need for new methods arises not only from current pressures and developments but also for longer-range projections of the future by "futurists." What futurism is, the kinds of things futurists do, and the tools they use will be discussed by a knowledgeable scientist-official of the National Science Foundation.

Room 902, Chamber of Commerce Building (By invitation only)

1400) 3 1600) - Simulation and Modeling in World Affairs Analysis

After a review of the concept of simulation and the uses of models for social analysis and forecasting, the speaker will discuss his own efforts in the field of modeling global systems. He will describe the background and purposes of his The Limits to Growth study, followed by an explanation of the components of the World 3 Model in terms of its major variables and relationships. The presentation will conclude with a brief discussion of the major criticisms of the study and his plans for future research in this area.

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FRIDAY, 16 FEBRUARY

0830) 0945) - <u>Future Weapons Systems</u> Seminar Member

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The process evolved for forecasting weapons systems the Soviets might develop 5-15 years hence uses a deductive approach whereby weapons systems are postulated and then verification is sought. The approval requires the use of many specialists both within and outside the Agency. The evolution of and progress made in this field will be delineated by a member of the Seminar, the Agency's scientific

1000)
1200) The Need for New Methods: An Overview

and technical officer who directs this activity.

An academic expert with government experience will briefly review the new methods and raise the following questions for general discussion:

- 1) What types of predictive performance can they now provide?
- 2) How good would their predictive power need to be to make them useful for intelligence purposes?
- 3) To what extent can predictive power be increased through applied research and development?
- 4) What relationships between government analysts and academic experts are likely to make the new methods most fruitful?

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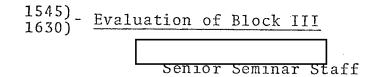
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FRIDAY, 16 FEBRUARY - continued

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1330)_ 1530)	Panel:	Implications of New Methodologies for CIA	_

The usefulness of new methodologies--both for future patterns of intelligence collection, processing and production as well as for selection and management of intelligence resources--will be explored by an inter-Directorate panel. The panelists will consider those methodologies now accepted as useful to intelligence and those which offer promise for advances in our intelligence work and product.



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